

# BOARD OF FIREFIGHTING PERSONNEL STANDARDS AND EDUCATION

## Inspector I/II Sample Test



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Version 0

### Fire Inspector I/II

1. IFSTA, Fire Inspection and Code Enforcement, 7 Edition, 1st Printing
2. NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plan Examiner, 2009 Edition

1. Which of the following involves connecting two objects that conduct electricity with something that is also a conductor?
  - A. Bonding
  - B. Conducting
  - C. Grounding
  - D. Power surge
2. What is an advantage of using carbon dioxide (CO<sub>2</sub>) in a fire extinguishing system?
  - A. It is very effective on active metals and metal hydrides.
  - B. It cannot harm exposed skin during application.
  - C. It works through oxygen removal or smothering.
  - D. It works primarily by freezing the burning material.
3. What can be done to an overhead door for it to meet the travel distance requirement?
  - A. A swinging door can be installed in the overhead door.
  - B. Nothing; a separate door must be installed nearby.
  - C. A portion of the overhead door can be a slide panel.
  - D. Employ a book-fold position with a collapsing mechanism.
4. When testing the available water supply, enough hydrants should be opened to ensure that the static pressure:
  - A. drops by no more than 25 percent.
  - B. drops by at least 10 percent.
  - C. drops by at least 5 percent.
  - D. drops by no more than 5 percent.
5. Which is the MOST accurate statement about repairs to masonry deterioration?
  - A. Even competent repairs of minor deterioration will compromise wall strength.
  - B. Thrust plates located on the exterior can anchor tension rods for wall repair.
  - C. Masonry deterioration of any importance will be recognizable by anyone.
  - D. Most visible masonry damage cannot be repaired.
6. During a mechanical system plans review, verify:
  - A. the brand of the HVAC system.
  - B. that exits are being used for return air.
  - C. the type of refrigerant used by the HVAC system.
  - D. that the HVAC system will not de-energize during fire.
7. The inspection of the conversion of a warehouse into a movie theater falls under what category of inspection?
  - A. Issuance of a permit
  - B. New construction
  - C. Change in occupancy
  - D. Owner/occupant request

8. Which is the MOST accurate statement concerning code requirements dealing with exit illumination and markings?
- A. Lighting must be continuous and have solely battery-powered units at the exit.
  - B. When emergency lights are required, battery or auxiliary power is required.
  - C. Floor level signs are a great substitute for standard ceiling markings and signs.
  - D. Floor signs are to be nearly level with the floor surface.
9. What is a strength of a performance-based code?
- A. It provides cost effective protection based on the actual hazard.
  - B. It provides thorough protection for multiple hazards.
  - C. It allows complete flexibility in how the code is enforced.
  - D. It eliminates the need to adopt other codes for the hazard.
10. Which of the following electrical systems convert high-voltage electricity supplied by the electrical utility service to an appropriate voltage for use in a building?
- A. Generators
  - B. Transformers
  - C. Switch gears
  - D. Emergency power supplies
11. Lumberyards can represent a very large fire hazard due to their:
- A. low fuel load.
  - B. high fuel load.
  - C. low moisture content.
  - D. high moisture content.
12. Which organization develops the majority of consensus standards used in the U.S. and Canada?
- A. Standards Council of Canada
  - B. National Fire Protection Association
  - C. ASTM International
  - D. Underwriters Laboratories Inc
13. What is an accurate statement explaining the operation of hoistway doors?
- A. Hoistway doors operate independently of the elevator car doors.
  - B. Freight doors operate from power coming from the elevator car doors.
  - C. Elevator hoistway doors cannot completely prevent the passage of smoke.
  - D. Swinging doors are always powered to prevent the passage of smoke.
14. What is the MOST accurate statement about use of PDAs and inspections drawings?
- A. Inspectors using PDAs do not need checklists or drawings.
  - B. Most AHJs will require drawings only, forbidding the use of PDAs.
  - C. PDAs are quite useful, along with checklist and drawings.
  - D. Names and addresses of occupancies should not be on drawings.

15. Which statement describes the function or operation of an escalator?
- A. The general speed is between 120 and 200 feet (36.57 m and 60.96 m) per minute.
  - B. The hand rail moves at a slightly slower rate than the steps.
  - C. Building codes often allow escalators to be part of the means of egress.
  - D. Moving escalators should not be used for emergency operations.
16. Which fire code requirement for operation of asphalt and tar kettles is MOST accurate?
- A. All exits doors must be open when operating inside buildings.
  - B. There must be at least two operators to place kettles on roofs.
  - C. One employee must be close by and have the kettle within sight.
  - D. LPG cylinder kettles do not require a nearby fire extinguisher.
17. The ICC categorizes day-care facilities of six or more children older than 2-1/2 as:
- A. day-care.
  - B. assembly.
  - C. educational.
  - D. institutional.
18. Which sprinkler system, although rare, is installed in large wharves where large stocks of materials are found?
- A. Combined dry-pipe and preaction system
  - B. Circulating closed-loop system
  - C. Multicycle sprinkler system
  - D. Antifreeze sprinkler system
19. Which statement describes issues and characteristics of a party wall?
- A. Party walls are usually not load bearing walls.
  - B. Party walls are most likely found on one side of a property line.
  - C. It is against code regulations to breach a party wall for any reason.
  - D. A common location for breaches in party walls is at the street level.
20. The purpose of a fire-alarm signaling system is to:
- A. meet all of the state and local code requirements.
  - B. meet all of the federal and state regulations and guidelines.
  - C. quickly alert occupants and emergency personnel to the presence of fire.
  - D. quickly address the safety hazard level present in the building.
21. Which of the following functions of a fire detection system should be operated during the acceptance test?
- A. Fire alarm control panel
  - B. Water flow alarm
  - C. Fire department connection
  - D. Battery-powered emergency lights

22. Which of the following statements about pipe chases and fire safety codes is most accurate?
- A. Buildings with mechanical rooms must have pipe chases also.
  - B. Residential plumbing pipes are not required in pipe chases.
  - C. If all the pipes carry water, there is no fire safety concern.
  - D. Pipe chases are exempted from fire-resistive construction regulations.
23. The angle cut at the end of a wood joist or beam is known as the:
- A. fire cut.
  - B. corbel.
  - C. beam pocket.
  - D. live load.
24. When open burning, grounds around a burn pile or bonfire should be cleared of vegetation or cut to less than \_\_\_\_\_ inches (mm).
- A. 2 (50)
  - B. 3 (75)
  - C. 4 (100)
  - D. 5 (125)
25. Which statement BEST describes inspection and testing requirements on a foam fire-extinguishing system?
- A. Valves and alarms must be tested annually.
  - B. Valves and alarms must be tested semiannually.
  - C. Foam proportioning equipment and concentrates should be checked every 5 years.
  - D. Foam proportioning equipment and concentrates should be checked every 2 years.
26. Which of the following is NOT a function of water mist systems?
- A. Use more water than standard systems
  - B. Block radiant heat and prevents flashover
  - C. Displace oxygen during a fire
  - D. Raise the humidity in the area
27. Net floor area is gross area minus the area:
- A. used by such things as tables, counters, and restrooms.
  - B. used for the means of egress system.
  - C. used for primary functions.
  - D. used for non-primary functions.
28. Exit capacity must be calculated by looking at each element of the means of egress and:
- A. adding up the capacity of the three elements and dividing by three.
  - B. subtracting the capacity of the exit from the average of the other two elements.
  - C. using the smallest to determine the total capacity for the entire means of egress.
  - D. using the largest to determine the total capacity for the entire means of egress.

29. What is the BEST statement describing conditions at construction and demolition sites?
- A. Fires are very rare at construction and demolition sites.
  - B. Building codes allow for standpipe removal before demolition.
  - C. Permits are required for both construction and demolition.
  - D. Site plans never have information about contours and grades.
30. Which of the following describes a condition where the unburned fire gases accumulated at the top of a compartment ignite and flames propagate through the hot-gas layer?
- A. Rollover
  - B. Flameover
  - C. Flashover
  - D. Backdraft
31. An aquifer can be a part of which component of an effective public water supply distribution system?
- A. Means of moving the water
  - B. Distribution system (including storage)
  - C. Water supply source(s)
  - D. Processing or treatment facilities
32. Since transformers can present special hazards to emergency response personnel, which statement accurately describes their hazard potential?
- A. All transformers being electrical, electrocution or fires are possible.
  - B. Old transformers with a cooling oil containing PCB are safe.
  - C. New transformers contain more toxic but less flammable oils are safe.
  - D. Only air-cooled transformers are safe to be around.
33. What is the correct statement about foam proportioning rates?
- A. Finished foam is 80% to 85% water.
  - B. Finished foam is 94% to 99.5% water.
  - C. Polar solvent fuels require 1 to 2% concentration.
  - D. High-expansion foam is no less than 6% concentration.
34. The extent to which a substance will mix with water is called its:
- A. miscible index.
  - B. polar solvent index.
  - C. solubility.
  - D. pyrolysis.



35. What is the most accurate statement concerning the use of the international picture-symbol labeling system?
- A. It is used only to illustrate the type of fire not suitable for the fire hydrant.
  - B. It is used only to illustrate the type of fire NOT suitable for the fire extinguisher.
  - C. It is the most widely used identification system.
  - D. It is older than the letter-symbol system.
36. Fire-extinguishing systems and portable fire extinguishers classified as \_\_\_\_\_ are used for fires involving oils and greases normally found in commercial cooking kitchens.
- A. Class B
  - B. Class C
  - C. Class D
  - D. Class K
37. After the task force completes their work and before being reviewed by legal counsel, the person usually assigned to prepare the new code legislation is:
- A. an agent representing the insurance industry.
  - B. an agent representing the building industry.
  - C. an agent of the Chamber of Commerce.
  - D. an agent who is the fire and life safety code official.
38. The potential use of pyrotechnics falls under what category of inspection?
- A. Annual or routine inspection
  - B. Response to a complaint
  - C. Issuance of a permit
  - D. Eminent hazard
39. Which fire detection and alarm service test procedure is the LEAST accurate?
- A. Wiring insulation and supports should be checked for damage.
  - B. Conduit connections and supports should be checked for damage.
  - C. All batteries, whether lead-acid or dry-cell, should be inspected annually.
  - D. All signaling devices should be free of dirt, dust, and paint.
40. Which statement describes the difference between a residential and an industrial sprinkler system?
- A. Residential systems are smaller and less expensive than industrial systems.
  - B. Residential systems use more water than industrial systems.
  - C. Industrial systems are larger and less expensive than residential systems.
  - D. Industrial systems generally always use the domestic water supply.

41. Which of the following statements regarding treatment or processing facilities is MOST accurate?
- A. Desalination plants are a necessary processing facility for all cities.
  - B. Most cities use the same processing plant as their sewage treatment plant.
  - C. During the filtration process, some cities add fluorides and do water softening.
  - D. Most cities recycle the water back through their processing plants.
42. Sodium nitrate, potassium nitrate, cellulose nitrate, and calcium hypochloride are all:
- A. oxidizers that inspectors will likely encounter.
  - B. common farm and garden fertilizers.
  - C. some of the safer toxic materials available.
  - D. banned from public use and highly explosive.
43. Which code consideration for storage of explosives and blasting agents is most accurate?
- A. Detonator-initiating devices should be labeled when stored next to explosives.
  - B. Powder kegs must be stored on end (bungs down) or seams down.
  - C. Cases of dynamite must be stored on end and not moved until needed.
  - D. Small-arms ammunition may be stored with Class A or Class B explosives.
44. Which class does NFPA 86, Standard for Ovens and Furnaces, use for an oven or furnace that operates at normal atmosphere pressure where no flammable volatiles or combustible materials are being heated?
- A. Class A
  - B. Class B
  - C. Class C
  - D. Class D
45. Which of the following statements regarding individual storage unit is MOST accurate?
- A. Because of unknown contents, units are treated as potentially hazardous storage.
  - B. The codes applying to warehouse inspections applies to the units.
  - C. If part of a large climate control system, individual units can be inspected.
  - D. Unless there is a complaint, units rarely can be inspected.
46. The correct code consideration for storage of flammable/combustible liquids and compressed/liquefied/cryogenic gases is that:
- A. containers should be vented or lids loosely sealed for ventilation.
  - B. the amount of loose combustion materials near storage areas must be limited.
  - C. empty drums next to storage areas should be labeled.
  - D. it is important to eliminate all sources of ignition from storage areas.



47. Which statement below about determining occupant load is MOST accurate?
- A. A stage or platform occupant load is 15 sq ft (1.39 sq. meters) per person.
  - B. Audience area with non-fixed seating would use 15 sq ft (1.39 sq. meters) per person.
  - C. A stage or platform occupant load is 7 sq ft (0.6 sq. meters) per person.
  - D. The audience and stage require 7 sq ft (0.6 sq. meters) per person.
48. To produce high-quality fire fighting foam, there must be:
- A. foam concentrate, water, air, and mechanical agitation.
  - B. the right proportion of water and foam concentrate.
  - C. foam concentrate and correct air pressure nozzles.
  - D. the mechanical agitation of foam and water.
49. The correct criteria in defining bulk packaging is that:
- A. maximum capacity cannot be greater than 119 gallons (450 L).
  - B. maximum net mass cannot be greater than 882 pounds (400 kg).
  - C. materials are loaded with no intermediate form of containment.
  - D. if a gas, the receptacle cannot exceed 1,001 pounds (454 kg).
50. When carbon monoxide detectors became available, many communities adopted codes to require them. This is an example of:
- A. insurance companies pushing for a change.
  - B. model code flexibility between adoptions.
  - C. technological changes creating a need to update codes.
  - D. local elected officials usurping their power for change.